WHAT IS CLAIMED IS:

1. A method for forming a second access penetration in a wall of a body lumen having a first access penetration in said wall, said method comprising:

introducing a penetrating device inwardly through the first access penetration into the body lumen;

positioning a penetrating element of the penetrating device at a target site in the lumen; and

advancing the penetrating element outwardly through the wall of the lumen and overlying tissue to form the second access penetration.

2. A method as in claim 1, wherein introducing the penetrating device comprises introducing a catheter having a lumen therethrough to the target site and pushing the penetrating device from the catheter, wherein the penetrating element deflects laterally so that it passes through the wall as it is advanced.

3. A method as in claim 2, further comprising rotating the penetrating device to aim the penetrating element prior to pushing the penetrating device from the catheter.

4. A method as in claim 3, further comprising viewing a marker on the catheter and/or penetrating device while the device is being rotated to determine when the penetrating device is properly aimed.

5. A method as in claim 2, further comprising anchoring or stiffening at least a portion of the catheter as the penetrating device is pushed from the catheter.

6. A method as in any of claims 1 to 5, wherein the penetrating device comprises a guide tube having a lumen therethrough and the penetrating device within the lumen, further comprising removing the penetrating element from the guide tube after the second access penetration has been formed, whereby the guide tube lumen provides a path between the first access penetration and the second access penetration.

7. A method as in claim 6, further comprising passing a guidewire through the lumen of the guide tube and withdrawing the guide tube to leave the guidewire in place.

8. A method as in any of claims 1 to 5, wherein the body lumen is a blood vessel.

9. A method as in claim 8, wherein the blood vessel is selected from the group consisting of arteries, veins, autologous grafts, artificial grafts, and arterio-venous fistulas.

10. A method for positioning a guidewire in a body lumen, said method comprising:

positioning a guide tube between a first access penetration and a second access penetration into the body lumen;

passing a guidewire through the guide tube, and

withdrawing the guide tube to leave the guidewire in place.

11. A method as in claim 10, wherein the body lumen is a blood vessel.

12. A method as in claim 11, wherein the blood vessel is selected from the group consisting of arteries, veins, autologous grafts, artificial grafts, and arterio-venous fistulas.

13. A method as in any of claims 10 to 12, wherein positioning the guide tube comprises introducing a penetrating device comprising the guide tube and a penetrating element through the first access penetration, positioning the penetrating element of the penetrating device at a target site, advancing the penetrating element outwardly through the wall to form the second access penetration and position the guide tube therein, and withdraw the penetrating element from the guide tube to leave a lumen for receiving the guidewire.

14. A method as in claim 13, wherein positioning the guide tube further comprises introducing a catheter having a lumen therethrough to the target site and pushing the penetrating device from the catheter, wherein the penetrating element deflects laterally through the wall as it is advanced.

15. A method as in claim 14, further comprising rotating the penetrating device to aim the penetrating element prior to pushing the penetrating device from the catheter.

16. A method as in claim 15, further comprising anchoring or stiffening at least a portion of the catheter as the penetrating device is pushed from the catheter.

17. A method as in any of claims 10 to 12, further comprising introducing at least one device over the guidewire through one of the first and second access penetrations after the guide tube has been withdrawn.

18. A method as in claim 17, wherein a second device is introduced over the guidewire simultaneously through the other of the access penetrations.

19. A method for intervening at a target site in a body lumen, said method comprising:

positioning a guidewire between a first access penetration and a second access penetration into the body lumen;

introducing a first device through the first access location over the guidewire to the target site;

introducing a second device through the second access location over the guidewire to the target site; and

intervening at the target site using at least one of the devices.

20. A method as in claim 19, wherein the body lumen is a blood vessel.

21. A method as in claim 20, wherein the blood vessel is selected from the group consisting of arteries, veins, autologous grafts, artificial grafts, and arterio-venous fistulas.

22. A method as in any of claims 19 to 21, wherein intervening comprises using both devices.

23. A method as in claim 22, wherein intervening comprises imaging with at least one of the devices.

24. A method as in claim 22, wherein intervening comprises deploying an occluding element from at least one of the devices.

25. A method as in claim 24, wherein intervening comprises deploying an occluding element from both of the devices to define an isolated region therebetween.

26. A method as in claim 22, wherein intervening comprises disrupting material within the body lumen with one device and collecting the dislodged material with the other device.

27. A method as in claim 19, wherein intervening at the target site comprises using at least one device to perform angioplasty, atherectomy, aspiration, filtering, infusion, mechanical thrombectomy, endarterectomy, luminal prosthesis placement, lysis, or thrombolysis.

28. A method as in claim 19, wherein positioning the guidewire comprises:

positioning a guide tube between the first access penetration and the second access penetration into the body lumen;

passing the guidewire through the guide tube; and

removing the guide tube to leave the guidewire in place.

29. A method as in claim 28, wherein positioning the guide tube comprises introducing a penetrating device comprising the guide tube and a penetrating element through the first access penetration, positioning the penetrating element of the penetrating device at a target site, advancing the penetrating element outwardly through the wall to form the second access penetration and position the guide tube therein, and withdraw the penetrating element from the guide tube to leave a lumen for receiving the guidewire.

30. A method as in claim 29, wherein positioning the guide tube further comprises introducing a catheter having a lumen therethrough to the target site and pushing the penetrating device from the catheter, wherein the penetrating element deflects laterally through the wall as it is advanced.

31. A method as in claim 30, further comprising rotating the penetrating device to aim the penetrating element prior to pushing the penetrating device from the catheter.

32. A method as in claim 30, further comprising anchoring a distal end of the catheter as the penetrating device is pushed from the catheter.

33. A device for positioning a filament in a body lumen, said device comprising:

a catheter which can be introduced through a first access penetration into the body lumen; and

means advancable from the catheter for creating a second access penetration and providing a filament path between said first and second access penetrations.

34. A device as in claim 33, wherein the catheter has at least one lumen therethrough and the advancable means is reciprocatably received in the catheter lumen.

35. A device as in claim 34, wherein the advancable means has a pre-formed tip which deflects laterally as it is advanced from the catheter.

36. A device as in any of claims 33 to 35, wherein the advancable means comprises a guide tube having a lumen therethrough and a penetrating element removable received in the lumen and extending from a distal tip of the guide tube, wherein the penetrating means can be withdrawn from the guide tube after the guide tube has been placed between the access penetrations to leave the guide tube lumen as the filament path.

37. A device as in claim 36, wherein the penetrating element is a stylet.

38. A device as in any of claims 33 to 35, further comprising an expandable anchor disposed over at least a portion of the catheter.

39. A device as in claim 36, further comprising a support tube having a lumen for receiving the guide tube therethrough.

40. A kit comprising:

a penetrating device having a penetrating element, and

instructions for use according to any of claims 1 to 5.

41. A kit comprising:

a guide tube; and

instructions for use according to any of claims 10 to 12.